DANILIN, A.A.; LUKASH, N.I.; MALINOVSKAYA, T.Ya.; SKVIRSKAYA, K.B.; SEREBRYANNIKOV, V.D.; SHESHINA, G.A.

Condition of the nervous system in subjects working with radioactive substances. Med.rad. 5 no.5:37-43 '60. (MIRA 13:12)
(NERVOUS SYSTEM) (RADIOACTIVITY--PHYSIOLOGICAL EFFECT)

DANILIN, A.A.; LUKASH, N.I.; SEREBRYANIKOV, V.D.; SHESHINA, G.A.

Results of a dynamic investigation of the peripheral blood in subjects working under the influence of small doses of ionizing radiations. Med. rad. 5 no.4:7-14 Ap '60. (MIRA 13:12)
(BLOOD) (RADIATION—PHYSIOLOGICAL EFFECT)

RABINOVICH, R.M.; DANILIN, A.A.

Problem of X-ray genotherapy in Besnier-Boeck-Schaumann disease.
Vest.rent.i rad. 36 no.3:64-65 My-Je '61. (MIRA 14:7)

1. Iz rentgenoterapevticheskogo otdeleniya (zav. - doktor meditsinskikh nauk L.R.Protas [deceased]) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR (dir. - prof. M.N.Bobedinskiy).
(GRANULOMA BENIGNUM)

ACC NR: AP6035748

SOURCE CODE: UR/0113/66/000/019/0119/0119

INVENTORS: Danilin, A. F.; Lovtsov, Yu. I.

ORG: none

TITLE: Polycycle hydraulic motor with radial pistons. Class 47, No. 186821

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 119

TOPIC TAGS: hydraulic device, hydraulic engineering, hydraulic equipment

ABSTRACT: This Author Certificate presents a polycycle hydraulic motor with radial pistons (see Fig. 1). The motor consists of a stator with contoured internal

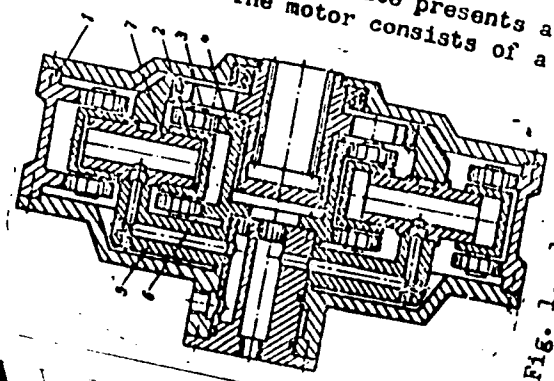


Fig. 1. 1 - casing of hydraulic motor; 2 - second piston; 3 - rollers; 4 - stator; 5 - rotor; 6 - deflector; 7 - cylinder

UDC: 621.225

Card 1/2

Card 2/2

ACC NR: AP6034261 (N) SOURCE CODE: UR/0390/66/029/005/0582/0588

AUTHOR: Danilov, A. F.; Indenbom, M. L.; Mikhel'son, M. Ya.; Khromov-Borisov, N. V.

ORG: Institute of Experimental Medicine, AMN SSSR (Institut eksperimental'noy meditsiny AMN SSSR); Institute of Evolutionary Physiology and Biochemistry im. I. M. Sechenova, AN SSSR, Leningrad (Institut evolyutsionnoy fiziologii i biokhimii AN SSSR)

TITLE: Curareform activity of some new bis-quaternary compounds

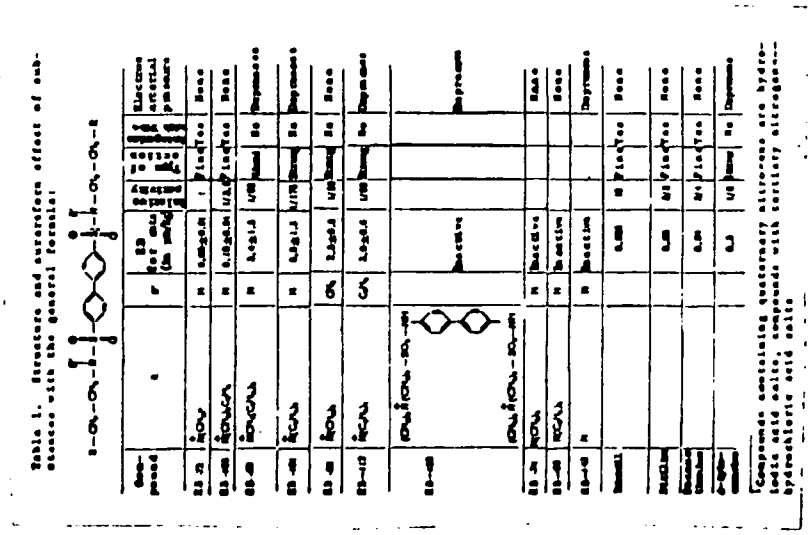
SOURCE: Farmakologiya i toksikologiya, v. 29, no. 5, 1966, 582-588

TOPIC TAGS: drug effect, curareform activity, bis quaternary compound, depolarization effect, cholinoreceptor, nervous system drug

ABSTRACT: Highly active curareform compounds may have 10 or 16 atoms between the quaternary nitrogens. In a series of polymethylene-bis-trimethylammonium compounds two peaks of curareform activity were observed: with 9 and 10, and 14—18 methyl groups between the nitrogens. A series of compounds whose structures appear in the table was synthesized and tested for their ability to block neuromuscular conduction. The curareform action of HB-72 is the depolarization type and is reversible by a nucleophilic agent. Successive replacement of methyl with

Card 1/3 UDC: 615.785.3

ACC NR: AP6034261



Cont'd 2/3

ACC NR: AP6034261

ethyl radicals at quaternary nitrogen atoms reduces activity. Changing the position of SO_2 and NH groups results in loss of activity (change of HB-72 to HB 153). Experimental results illustrated the importance of an interquaternary distance of 16 atoms and the presence of the sulfamide groups for the reaction of these substances with cholinoreceptors. Orig. art. has: 2 figures and 1 table. [W.A. 50]

SUB CODE: 06/ SUBM DATE: 12May66/ ORIG REF: 004/ OTH REF: 017

Card 3/3

DANILIN, A.G.; SOLOV'YEV, I.I.

Device for the automatic lifting and lowering of the ring plate of a spinning machine. Tekst.prom. 23 no.1:43-45 Ja '63. (MIRA 16:2)

1. Glavnyy mekhanik fabriki "Vozrozhdeniye" Leningradskogo soveta narodnogo khozyaystva (for Danilin). 2. Nachal'nik elektrotsekha fabriki "Vozrozhdeniye" Leningradskogo soveta narodnogo khozyaystva (for Solov'yev).
(Spinning machinery)

DANILOV, A.I.; CHERVONSKIY, V.I.; [illegible]

Discussions. Vest AMN SSSR 18 No.5:46-48 '63. (MIRA 16:8)
(NO SUBJECT HEADINGS)

DANILOV, A.I.; CHERVONSKIY, V.I.; NOSIK, N.N.

Discussions. Vest AMN SSSR 18 no.5:94-96'63. (MIA 16:8)
(NO SUBJECT HEADINGS)

Name: DANILIN, A. I.

Dissertation: Experimental study on the use of carbon electrodes in fiberglass, gamma rays and simplified thermal sounds in measuring soil moisture

Degree: Cand Tech Sci

Affiliation: Moscow Inst of Water Economy Engineers imeni V. R. Vil'yams

Defense Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 1, 1957

DANILIN, A.I.

Soil moisture measurement on the basis of ohmic resistance of carbon electrodes in glass wool placed in the soil. Meteor. i gidrol.no.7: 40-44 Jl '56. (Soil moisture) (MLRA 9:10)

PHASE I BOOK EXPLOITATION 516

Danilin, Aleksey Ivanovich

Primeneniye yadernykh izlucheniy v gidrometeorologii (Use of Nuclear Radiation in Hydrometeorology) Leningrad, Gidrometeoizdat, 1957. 67 p. 3,000 copies printed.

Resp. Ed.: Kuz'min, P.P.; Ed.: Mironenko, Z.I.; Tech. Ed.: Vladimirov, O.G.

PURPOSE: The purpose of the booklet is to provide engineers and technicians working in meteorology and hydrology, as well as soil specialists interested in water in relation to ground and soils, with a concise review of general information on nuclear radiation, the methods of measuring it, and the possible use of various isotopes for hydrometeorological tests.

COVERAGE: By describing the following instruments and techniques the author wishes to draw the attention of technicians working in this field to the importance of the use of isotopes in hydrometeorology: 1. A field instrument for measuring the moisture content in soil and water reserves in snow cover;

Card 1/4

2. an improved technical procedure is introduced by replacing the common soil-weight evaporator, by a gamma ray device for measuring the radiation penetrating the soil cover. The methods of measuring nuclear radiation are little known and insufficiently tested. These can be successfully applied for measuring water level, the thickness and nature of sediments in water reservoirs, the status and increase in the growth of vegetation, the velocity of current and winds. Moreover, the successful application of various isotopes in science, industry and agriculture is indicative of the growing use of this new tool.

TABLE OF CONTENTS:

Editor's note 3

Introduction 4

Ch. I. Basic Data on Nuclear Radiation and Methods of Measuring It

1. Molecules and atoms 6
2. Nuclear radiation 9
3. Radioactivity units 16

Card 2/4

Use of Nuclear Radiation in Hydrometeorology 516

4. Nuclear radiation measurements 17

Ch. II. The Use of Nuclear Radiation in Meteorological and Hydrological Measurements

5. Measuring the moisture content in soil by means of gamma rays 31
6. Measuring the moisture content in soil by means of neutrons 39
7. Measuring evaporation from the surface of soil 45
8. Measuring the snow's water content 49
9. Measuring water levels 56
10. Measuring bottom sediments in water reservoirs and organic matter in the swamps 60
11. Measuring the velocity of winds and currents 61
12. Measuring the density of grass growth and the increase in growth of green vegetation 63
13. Use of gamma rays in determining the volumetric weight of soil 64

Use of Nuclear Radiation in Hydrometeorology 516

14. Radioactive counters in meteorology 65
15. Safety measures 66

AVAILABLE: Library of Congress

MM/ksv
8-5-58

Card 4/4

Country : USSR
Category : Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour : RZhBiol., No 6, 1959, No 24590

Author : Danilin, A. I.
Inst : Scientific Research Institute of Hydrometeorological Apparatus Construction.
Title : The Ohmic Method of Measuring Soil Humidity with the Application of Carbon Electrodes in Glass Fibers.
Orig Pub : Tr. N.-i. in-ta gidrometeprol. priborostr., 1957, vyp. 5, 52-78

Abstract : Simple and cheap producers of soil humidity (carbon and gypsum) were developed, which make it possible to measure soil humidity ranging from field-water capacity to the atmospheric dry state. Intermediate media - glass fibers,

Card : 1/2

3(7), 3(5)
21(4)

SOV/10-59-3-16 12

AUTHOR: Danilin, A.I.

TITLE: Application of Gamma-Radiation in Research on Water Characteristics of Soil and Snow Cover. Scientific Research Methods

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959, Nr 3, pp 103-109 (USSR)

ABSTRACT: The author first criticizes other systems of measuring the humidity of soil (the drying and weighing, the electric and the thermal methods). He pleads for the use of isotopes, especially of Co^{60} having a half-life of 5.3 years. He describes and illustrates methods of measuring: 1) the vertical beam; 2) the horizontal beam of gamma-rays. The tests carried out at the Dubovskaya nauchno-issledovatel'skaya gidrologicheskaya laboratoriya (Dubovskaya Scientific Research Hydrological Laboratory) in the Dal'skiye steppes as well as at the agrometeorological stations of Buzuluk and Kiyev proved that the new method is not less reliable than the other methods. Instructions are given on how the

Card 1/3

Application of Gamma-Radiation in Research on Water Characteristics of Soil and Snow Cover. Scientific Research Methods

secondary factors affecting the accuracy of measurements can also be taken into account (fluctuation in radioactivity; changes in the mass of the examined stratum; influences of cosmic and earth radiations; gradual disintegration of the gamma-ray source). The Cs^{137} having a half-life of 33 years is recommended for measuring the evaporation rate of the soil surface. The NII GMI Institute constructed a snow-meter for measuring the humidity of the snow. The apparatus consists of a metallic rod for holding a piece of Co^{60} at its lower end and a gamma-ray pick-up at its upper part; and of a portable gamma-ray counter. The measuring operation is completed within 2 or 3 minutes. The apparatus can also be combined with an automatic radio transmitter. The tests conducted in the Caucasus were successful. Volumetric soil weight can also be measured by means of gamma-rays. Soviet scientists are conducting experiments aiming at measuring the humidity of the soil by means of neutrons. The experiments are based on the fact that fast neutrons are

Card 2/3

SOV [illegible] 32

Application of Gamma-Radiation in Research on Water Characteristics of Soil and Snow Cover. Scientific Research Methods.

slowed down by hydrogen nuclei. There are 3 diagrams, 2 graphs, 1 table and [illegible] Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya (Scientific Research Institute for Constructing Hydrometeorological Apparatus).

Card 3/3

AUTHORS: Syyko, A. A., Danilin, A. I.

S/050/60/000/03/012/020
B007/B002

TITLE: On the Complex Automation of Hydrometeorological Measurements

PERIODICAL: Meteorologiya i gidrologiya, 1960, Nr 3, pp 44 - 45 (USSR)

ABSTRACT: The Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya (Scientific Research Institute of Hydrometeorological Instruments) and others, developed a series of automatic devices and telemeters for measuring hydrometeorological elements. Some of them are mentioned here. At a fixed time, an automatic, radiometeorological station records atmospheric pressure, air temperature, mean wind velocity, and direction, amount of precipitation, and the presence of sunshine. These data are then transmitted by radio to the information collecting station. An automatic radioanemometer which is set up on a large reservoir transmits information to the ships regarding wind velocity and direction over the open part of the water basin. An automatic radio precipitation gauge transmits the precipitation amount in the place concerned. Radiosondes with automatic recorder, measure meteorological elements at different altitudes. Automatic devices and telemeters record wind velocity and direction, water level, swell flow velocity and direction, transparency of the atmosphere, and

Card 1/2

altitude of the lower cloud boundary. Despite all these new devices, the question of automatizing hydrometeorological measurements and their interpretation, is far from being solved. The rate at which the available means of automatizing these measurements are introduced, is insufficient. First of all, a plan has to be set up for the comprehensive automation of observations, their collection and interpretation. This problem may be very difficult, but it is solvable. Some general rules are given here in this regard.

DANILIN, A.I.

Test results of the gamma-ray method for soil moisture measurement. Trudy NIIGMP no.10:29-[illegible] 61. (MIRA 15:5)
(Gamma rays) (Soil moisture--Measurement)

GOLUBEV, A.V.; DANILIN, A.I., otv. red.; MEDER, V.M., red.izd-va; ZUDINA, V.I., tekhn. red.

[Measuring and recording soil temperature using thermo-elements] Izmerenie i registratsiia temperatury v gruntakh s pomoshch'iu termoelementov. Moskva, Izd-vo "Nauka," 1964. 145 p. (MIRA 17:3)

DANILIN, A.I.

Photoelectric method for determining soil moisture.
Pochvovedenie no.11:90-95 N '65. (MIRA 18:12)

1. Institut merzlotovedeniya im. [illegible], Moskva.
Submitted Oct. 24, 1964.

[illegible] A. A.

TITLE [illegible] struynaya [illegible] detaley

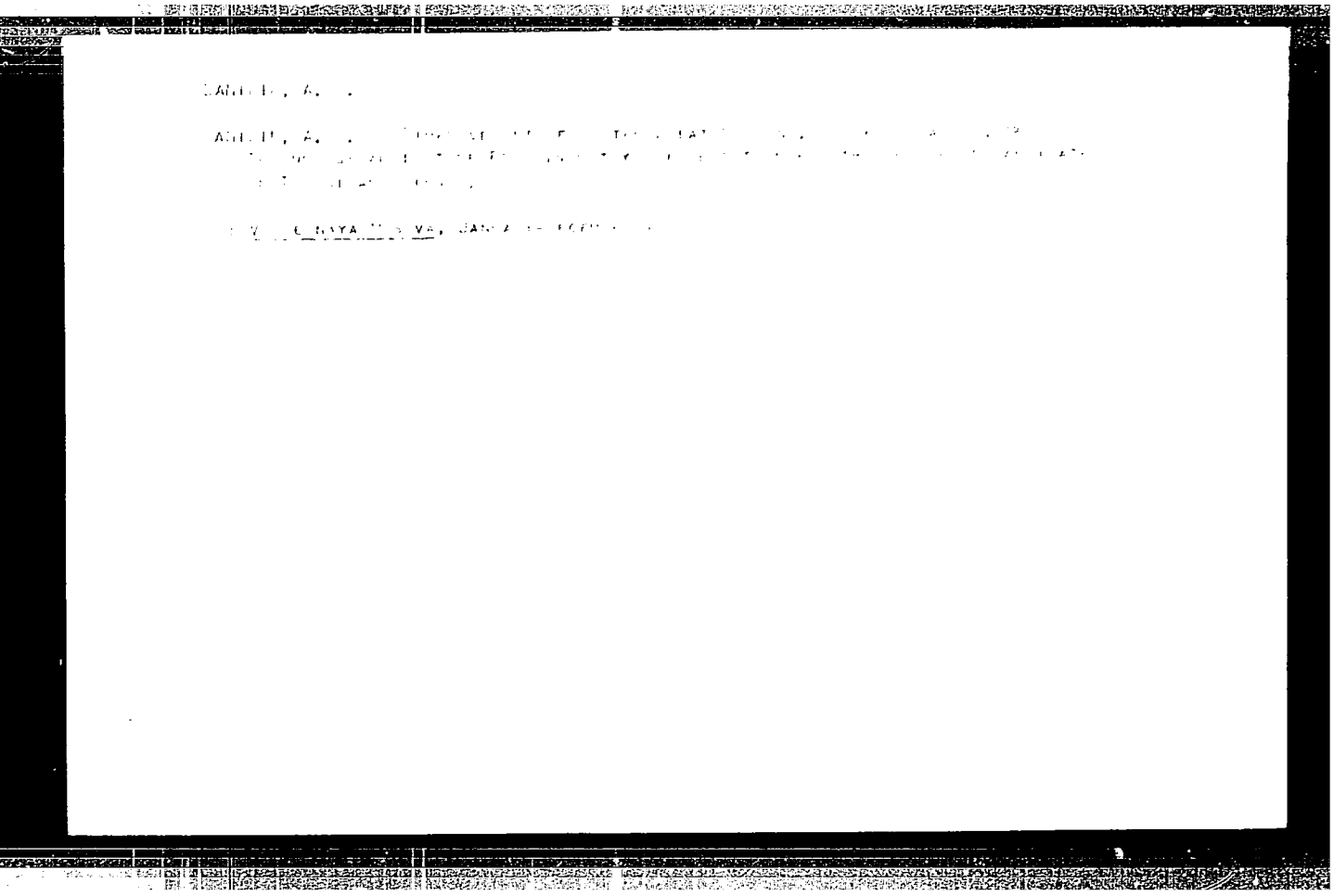
[illegible] 44 49 [illegible]

[illegible] sandblasting [illegible] the [illegible] automobile [illegible] graphs

[illegible] The Moscow Plant [illegible]

[illegible]

[illegible] 1. Automobile industry 2. Sandblasting Application



DANILIN, A.S.

21(4) PHASE I BOOK EXPLOITATION SOV/2714

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; yadernoye goryucheye i reaktornyye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 5,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Pozdnyakov and G.N. Pchelintseva; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for professors and students of schools of higher technical education where the subject is taught; and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by O.L. Zverev, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2081 for the titles of the other volumes of the set.

Budarev, I.V., and A.S. Vol'skiy. Investigating the Reactions of Uranium Dioxide and Plutonium Dioxide Chlorination by Carbon Tetrachloride (Report No. 2195) 285

Voronov, N.M., Ye.A. Voytekhova, and A.S. Danilin. Phase Diagrams for the UO_2 - ZrO_2 and the ThO_2 - ZrO_2 Systems (Report No. 2490) 315

Budnikov, P.P., S.G. Tresvyatskiy, and V.I. Kushakovskiy. Binary Phase Diagrams for UO_2 - Al_2O_3; UO_2 - BeO; and UO_2 -MgO (Report No. 2193) 329

Sergeyev, G.Ya., V.V. Titova, Z.P. Nikolayeva, A.M. Kaptel'tsev, and L.I. Kolobneva. The Influence of Fabrication Methods on the Structure and Properties of Uranium (Report No. 2307) 333

Ivanov, O.S., and T.A. Badayeva. Phase Diagrams of Certain Ternary Systems of Uranium and Thorium (Report No. 2043) 347

Card 6/ 11

3912

[illegible] 40/ [illegible] 000/000/011/0[illegible]

D20[illegible] D302

21210C

AUTHORS: V[illegible] N. M., Dudkin, A. [illegible] and K[illegible] I. T.

TITLE: Structure of alloys of th[illegible] with [illegible] oxide

SOURCE: Akademiya nauk SSSR. Institut [illegible] Stroyeniye splavov nekotorykh sistem [illegible] Moscow, Gosatomizdat, 1961, 457-4[illegible]

TEXT: This investigation was motivated by the f[illegible] that the pub[illegible]lished data on this system are far from complete. The system was investigated by thermal, X-ray and dilatometric methods. The melting point of the alloys was determined on [illegible] - [illegible]0 mm specimens prepared by briquetting of powder mixtures. The [illegible] were performed in an electrically heated tungsten [illegible] in argon. The temperature was determined by reference to melting points of known materials, the error not exceeding ± [illegible]. The [illegible] [illegible] [illegible] [illegible] appeared to those previously [illegible] by R[illegible] et al (Ref. [illegible] Z. anorgan. und allgem. Chem. [illegible]0 [illegible] Th[illegible],

Card [illegible]

DANILIN, A.S., KOVALEV, I.T. AND [illegible], N.M.

"Determination of the rate of vaporization of metallic oxides on samples heated by electric current."

Report submitted to the Intl. Atomic Energy Agency Symposium on Thermodynamics of Nuclear Materials.
Vienna, Austria May 1962

BLOKH, G.S.; DANILIN, A.S.; EL'KINSON, R.Z.

Study of the durability and reliability of asbestos-cement roofing on public buildings. Trudy NIIAsbesttsementa no.16:122-144 '63. (MIRA 16:8)

(Roofing, Asbestos cement)

DANILIN, A.S.; BAKHIREV, I.I., aspirant

Filter embankments. Put' i put. khoz. 8 no.1:19 '64.
(MIRA 17:2)

1. Nachal'nik mostoispytatel'noy stantsii, g. Khabarovsk (for Danilin). 2. Khabarovskiy institut inzhenerov zheleznodorozhnogo transporta (for Bakhirev).

H/004/61/000/013/003/003
D018/D105

AUTHOR: Danilin, B., Candidate of Technical Sciences

TITLE: Can we influence the weather?

PERIODICAL: Tudomány és Technika, no. 13, 1961, 454-455

TEXT: The article deals with weather modification methods, describes in general various experiments of the last few decades and mentions briefly a recent Soviet experiment for stimulating precipitations by sound generators. This experiment was recently carried out in the Elbrus Mountain by an expedition of the Soviet Academy of Sciences. For this purpose several giant sound generators with tubes 9 sq m in diameter [Abstracter's note: obviously a misprint] were installed on the slopes of one of the mountain passes. By directing the sound waves towards the clouds rain drops were stimulated. There are 3 figures.

Card 1/1

USSR / Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi R

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74196

Author : Danilin, B. F.

Inst : Not given

Title : Test of Treatment of Foot Rot in Sheep

Orig Pub: Ovtsevodstvo, 1957, No 1, 47

Abstract: No abstract.

Card 1/1

USSR/Diseases of Farm Animals - Diseases Caused by Helminths. 1-3

Abs Jour : Ref. Zhur - Biol., No 1, 1958, 5238

Author : Ivanilin, B.F.

Inst : Kaliningrad Scientific Research Veterinary Station.

Title : Experimental Use in Industry of Phenothiazine Against Meteraclasis in Hens.

Orig Pub : Tr. Kaliningradsk. n.-i. vet. st., 1957, vyp. 2, [illegible].

Abstract : A dose of 1 gr of phenothyazine admixed to [illegible] mixed feed and administered to hens 3 times with a 7-10 day interval, resulted in a complete liberation of the hens from heterakides, as well as brought about a considerable reduction in the intensity of a parasis infestation.

Card 1/1

- [illegible] -

[illegible] of F[illegible] [illegible]-Entomosis. F

[illegible] : Rei [illegible] - [illegible],

Author : D[illegible], [illegible] F.
Inst : Not given
Title : [illegible]

Orig Pub : Veterinariya, [illegible], 03

Abstract : [illegible] portion of 70 [illegible]. For [illegible] were then exposed to the [illegible] of the [illegible]. This treatment, carried out twice with an interval of [illegible] freed the [illegible] from the [illegible]. Two weeks later [illegible].

Card 1/1

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00110[illegible]

DANILIN, S. P.

"The study of bee diseases."

Veterinariya, Vol. 37, No. 4, 1960, p. 52

Kaliningrad NIVS

DANILIN, Boris Stepanovich; MILENDER, P.A., professor, redaktor; FRIDKIN, L.M., tekhnicheskiy redaktor

[Vacuum-pumps and apparatus] Vakuumnye nasosy i agregaty. Pod red. P.A.Milendera. Moskva, Gos. energ. izd-vo, 1957. 110 p. (MLRA 10:6)
(Vacuum pumps)

DANILIN, B.S.

Electric instruments for measuring vacuum. Izm.tekh.no.1:86-93 Ja-F '57. (MLRA 10:4)
(Electric instruments)(Vacuum--Measurement)

DANILIN, B.S.

Electric vacuum meters. Priborostroenie no.3:12-14 Mr '57.
(MLRA 10:5)
(Vacuum gauges)

Danilin, B.S.

AUTHOR: Danilin, B.S., Candidate of Technical Sciences 25-12-8/39

TITLE: Invasion of the Space (Vtorzheniye v kosmos)

PERIODICAL: Nauka i Zhizn', 1957, # 12, pp 4-8 (USSR)

ABSTRACT: The second Soviet satellite (sputnik # 2) weighed 508,3 kg, circled the earth in 103,7 minutes and reached a height of 1,700 km. The satellite was equipped with the following devices: an apparatus for measuring the radiation of the sun's ultra-violet radiation, a spherical container equipped with a radio transmitter and an airtight cabin. Devices for measuring temperature, cosmic rays and a radio telemetric apparatus were mounted directly on the body of the rocket. In addition, the spherical container held batteries and sensitive devices for registering pressure and temperature, as well as a system for regulating these parameters. The main purpose of the satellite was the study of short and ultra-violet waves, and cosmic rays. For this purpose 3 receivers with the photoelectronic amplifiers, were installed. After prolonged periods of training, the reactions of the first space passenger, a dog, were studied. The data over a period of 7 days were relayed to earth and are presently being evaluated.

Card 1/2

Invasion of the Space 25-12-8/39

Studies of distances traversed by radio waves in the ionosphere were of great importance. Radio signals received have shown that waves of 15 m in length were received over distances exceeding 15,000 km. In some instances the radio waves reached the receiver not by the shortest route, but circled the globe.
There are 3 figures.

AVAILABLE: Library of Congress

Card 2/2

AUTHOR DANILIN, B.S., MIKHNEVICH, V.V., REPNEV, A.I.
SHVIDKOVSKIY, Ye.G. 53-1b-14/18

TITLE The Problem of Measuring Pressure and Density of the High Layers of the Atmosphere by Means of an Artificial Earth Satellite. (Zadacha izmereniya davleniya i plotnosti vysokikh sloyev atmosfery s pomoshch'yu iskusstvennogo sputnika zemli. Russian)

PERIODICAL Uspekhi Fiz. Nauk 1957, Vol 63, Nr 1b, pp 205-225 (USSR)

ABSTRACT By the instrument for the measuring of pressure and density the authors here understand a "manometer" of any suitable type (e.g. an ionization manometer or an omegotron). First the authors discuss the various models of the upper atmosphere. According to the authors the models MITRA and NICOLET are the nearest approach to reality. A table gives values of concentration and pressure which correspond to various models of the atmosphere. For further precise determination of these data tests with rokes and artificial satellites are suitable. In investigations of this kind various problems arise with regard to the interaction of a rapidly flying body and a diluted gas. The authors here study some of these problems. First the authors discuss the currents of particles, the momenta and the energies for the case of a homogeneous gas. From 200 km upward

CARD 1/5

The Problem of Measuring Pressure and Density of the Hig... Layers of the Atmosphere by Means of an Artificial Earth Satellite. 53-2b-14,18

the interaction between a body moving with a speed of some km/sec and the atmosphere will conform to the laws of a free molecular flow. Some preliminary works on this problem are cited. The behavior of a surface is here calculated which moves with a speed U with respect to the earth. The energy transmitted by this surface is also calculated. The oscillation energy is not calculated here.

The presure of the flow of a homogeneous gas: The surface π mentioned above is considered as a plate impermeable to particles. The total pressure acting on this plate is calculated. From the corresponding formula the following may be concluded: At a speed of the satellite of ~8 km/s. an average molecular weight of the air of ~ 20, and at specular reflection of the molecules ($f = 0$), the frontal presure on the surface of the satellite is $P \sim 10^2 P$, which means that it exceeds the pressure in the free atmosphere by two orders of magnitude. The tangential stress on the lateral plane surface of the moving body will amount to zero in the case of specular reflection.

CARD 2/5

The Problem of Measuring Pressure and Density of the High Layers of the Atmosphere by Means of an Artificial Earth Satellite. 53-1b-14/18

Accommodation can be introduced: Like in the case of gas dynamics, a slowing of the temperature of the gas whose progressing power was consumed by its being heated. During interaction with the screen the energy can newly distribute over the degrees of freedom. Part of the energy of the progressive movement of the molecules can transform itself into revolution energy and oscillation energy. The measurements of the coefficients of accommodation indicate the following: This coefficient depends on the kind of gas, on the temperature of the gas, on the temperature and the form of the surface and on the presence of admixtures. The accommodation coefficients of the degrees of freedom of the progressive motion and the freedom degrees of rotation are almost equal.

The equilibrium pressure in the cavity of the manometer: The consideration of the properties of the free molecular flow carried out here permits the establishment of a relation between the pressure and the number of particles

CARD 3/5

The Problem of Measuring Pressure and Density of the High Layers of the Atmosphere by Means of an Artificial Earth Satellite.

wire is stretched which serves as ion collector. Outside the lattice a cathode with a straight channel is fixed parallel to the collector.

(10 illustrations and 4 tables)

ASSOCIATION: not given.
PRESENTED BY: -
SUBMITTED: -
AVAILABLE: Library of Congress.

CARD 5/5

The Problem of Measuring Pressure and Density of the High Layers of the Atmosphere by Means of an Artificial Earth Satellite.

in the unit of volume in the cavity of the manometer and the corresponding parameters of the surrounding mediux. The authors here calculate the most simple case: The cavity of the manometer is connected with the atmosphere by a diaphragm with the radius r. The recordings of the manometer are rather difficult to interpret. If a rather long tube is placed between the cavity of the manometer and outside atmosphere, the pressure within the manometer must rise. Something is also said about the time constant of the manometer; under the test conditions assumed here it is of a magnitude of 2.10^{-3} sec.

Some problems connected with the measurement of pressure: The authors here shortly discuss the following problems: ionization by impact, "dissociation by impact", the separation of gas, the electric charge of the satellite, the knocking out of atoms from the surface of the satellite, the natural ionization of the atmosphere, photoemission. Finally the apparatus is discussed on the basis of a drawing. Along the axis of a cylindrical lattice a thin

CARD 4/5

5(0) PHASE I BOOK EXPLOITATION SOV/1979

Danilin, Boris Stepanovich

Vakuum i yego primeneniye (The Vacuum and Its Uses) Moscow, Trudrezervizdat, 1958. 87 p. 5,000 copies printed. (Series: Novaya tekhnika i peredovyye metody truda)

Scientific Ed.: A. B. Tseytlin; Ed.: M.V. Kobrinskaya; Tech. Ed.: Yu.N. Gorokhov.

PURPOSE: This booklet is intended for teachers and mechanics in training schools for reserve workers and may be used by engineers and technologists who employ various types of vacuum apparatus in their work.

COVERAGE: The booklet gives fundamental information on vacuums and the most important properties of highly rarified gases, and acquaints the reader with techniques for creating and measuring vacuums in various branches of science, technology, and industry. There are no references given.

Card 1/3

The Vacuum and Its Uses SOV/1979

TABLE OF CONTENTS:

Introduction 3

I. Principle of Vacuums and the Most Important Properties of a Rarified Gas

II. Technique of Creating and Gaging a Vacuum
1. Modern methods of creating a vacuum 11
2. Vacuum pumps 12
3. Physicochemical methods of creating a vacuum 23
4. New evacuation methods 26
5. Structure of vacuum systems 30
6. Vacuum-measuring technique 42
7. Creating and measuring a superhigh vacuum 50
8. Testing vacuum apparatus for hermeticity 51

III. Use of Vacuums
1. Production of electrical vacuum apparatus 60
2. Electron microscope 73

Card 2/3

3. Melting and sintering metals in a vacuum 76
4. Metallization in a vacuum 81
5. Drying and treating electrotechnical [electrical insulation] materials under a vacuum 84
6. Drying food products by vacuum sublimation 87

AVAILABLE: Library of Congress TM/lsb
7-28-59

Card 3/3

SOV/5-58-12-9/40

AUTHOR: Danilin, B.S., Candidate of Technical Sciences

TITLE: Sputnik Studies the Atmosphere (Sputnik izuchayet atmosferu)

PERIODICAL: Nauka i zhizn', 1958, Nr 12, pp 23-27 (USSR)

ABSTRACT: The exploration of high, thin layers of the atmosphere and its physical processes is of great importance for weather forecasts, radio communication over long distance and numerous problems connected with cosmic flights. The author describes the possibilities offered for exploring the atmosphere of the Earth by means of rockets and sputniks, giving brief description of the instruments installed. Data on the density of the atmosphere from the sputniks confirmed the figures obtained experimentally and by calculation. It was found that at a height of 266 km, the density of the atmosphere was approximately 10 billion times less than at the earth's surface. In contrast, the ten-

Card 1/2

sion of the electric field in higher strata of the atmosphere was from 10 to 100 times higher than assummed The study of data on the density and ion concentration of the atmosphere, the electric and magnetic fields, meteor particles, cosmic rays, corpuscular irradiation of the sun and other phenomena obtained from the third Sputnik, is of greatest importance for further research, as well as for the intended manned flight into space There are 3 diagrams

SOLODOVNIKOV, Vladimir Viktorovich, prof.; POKROVSKIY, Georgiy Iosifovich, prof.; DANILIN, Boris Stepanovich, kand.tekhn.nauk; FAYNBOYM, I.B., red.; SAVCHENKO, Ye.V., tekhn.red.

[Achievements in modern physics] Uspekhi sovremennoi fiziki; sbornik. Moskva, Izd-vo "Znanie," 1959. 30 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.9, Fizika i khimiia, no.28) (MIRA 13:1)
(Automation) (Aeronautics) (Atmosphere)

DANILIN, B S

3(0) PHASE I BOOK EXPLOITATION SOV/3065

Iskusstvennyye sputniki zemli, vyp. 3 (Artificial Earth Satellites, No. 3) Moscow, Izd-vo Akademii nauk SSSR, 1959. 125 p. 5,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Resp. Ed.: L.V. Kurnosova; Ed. of Publishing House: L.V. Samsonenko; Tech. Ed.: Ya. Rylina.

PURPOSE: This collection of articles is the third in a series intended to disseminate data collected from artificial earth satellite investigations to scientists.

COVERAGE: The collection of articles deals with various problems arising in the operation of artificial satellites. The papers also cover the use of artificial satellites as scientific instruments for various types of geophysical investigations.

4. Batrakov, Yu.V., and V.F. Proskurin. On Perturbations in the Orbits of Artificial Satellites Caused by the Resistance of the Air 39

5. Vakhnin, V.M., and V.V. Beletskiy. Observation of Artificial Satellites Using the Anticipation Method (metod ozhidaniya) 47

6. El'yasberg, P.Ye. Secular Variations of Orbit Elements as a Function of the Resistance of the Air 54

7. Lavrent'yev, M.A. Problem of Puncture at Cosmic Speeds 61

8. Shklovskiy, I.S., and V.G. Kurt. Determination of the Density of the Atmosphere at an Altitude of 430 km by the Method of Sodium-vapor Diffusion 66

9. Imyanitov, I.M., and Ya.M. Shvarts. Methods of Preventing Interference Currents Arising at the Point of Input of an Electrostatic Fluxmeter During Operation in a Conductive Medium 77

10. Mikhnevich, V.V., B.S. Danilin, A.V. Repnev, and V.A. Sokolov. Some Results in Determining the Structural Parameters of the Atmosphere With the Aid of the Third Soviet Sputnik 84

11. Istomin, V.G. Radio-frequency Mass Spectrometer for Investigation of the Ion Composition of the Upper Atmosphere 98

12. Kuchay, S.A. Manometer Error Caused by Small Leaks in the Envelope of an Artificial Satellite 113

13. Zonov, Yu.V. On the Problem of Interaction of an Artificial Satellite and the Magnetic Field of the Earth 118

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Card 3/3

14(1);25(2) PHASE I BOOK EXPLOITATION SOV/2710

Danilin, B.S.

Konstruirovaniye vakuumnykh sistem (Design of Vacuum Systems) Moscow, Gosenergoizdat, 1959. 271 p. 9,000 copies printed.

Ed. (Title page): P.A. Nilender, Professor; Ed. (Inside book): S.A. Akalunin; Tech, Ed.: N.I. Borunov.

PURPOSE: This book is intended for persons who design, assemble, and operate vacuum generating apparatus; it may also be used as a textbook for students of institutions of higher technical education who specialize in the field of electrovacuum techniques.

COVERAGE: The book is a practical manual on vacuum installations. It contains general principles of their design and the description of properties of materials used in their construction. The details of various elements and components of vacuum installations and the methods of sealing vacuum connections are shown, and examples of many designs of industrial and laboratory vacuum installations are given. The book contains a description of industrial-

Card 1/6

ly produced Soviet vacuum pumps, vacuum-measuring instruments, and instruments for leak detection in vacuum systems. The book also explains briefly the basic physical concepts of vacuum techniques which are necessary for a rational approach to vacuum installations. The author expresses thanks to Academician S.A. Vekshinskiy, M. I. Men'shikov, P.I. Sokolov (Deceased), K.A. Savinskiy, A.B. Tseytlin, A.E. Berlin, Professor R.A. Nilender, and A.V. Balitskiy, Engineer, for help in producing the book. There are 78 references: 63 Soviet, 11 English, 3 German, and 1 French.

TABLE OF CONTENTS:

Preface 3

Ch. I. Basic Information on Vacuum Techniques and Vacuum Materials 7
1. Concept of the vacuum and of more important properties of rarefied gases 7
2. Basic requirements for vacuum apparatus 19
3. Metals and alloys applicable to the manufacture of vacuum systems 27

Ch. II. Nondetachable Connections of Vacuum System Elements 30
1. Vacuum-tight welding and soldering of metals 30
2. Vacuum-tight junction of metal with glass 37

Ch. III. Detachable Connections of Vacuum System Elements 43
1. Vacuum-tight detachable connections with rubber and fluoroplastic sealing 43
2. Vacuum-tight detachable connections with metallic sealing 59

Ch. IV. Sealing of Moving Parts, Vacuum Taps, Valves, Gates, and accumulators 63
1. Sealing of moving parts 63
2. Vacuum taps, valves, shutters, and accumulators 77

Ch. V. Vacuum Pumps, Traps, and Power Units 92
1. Pump parameters 92
2. Rotating oil pumps 96
3. Fields of application; special construction features and operation of rotating oil pumps 102

4. Inert-gas pumps 114
5. Rotating multivane pumps 120
6. High-vacuum steam-jet pumps 123
a) High-vacuum mercury-vapor pumps 126
b) High-vacuum oil-vapor pumps 128
7. Auxiliary (booster) pumps 147
8. Special features of steam-jet pump operation 154
9. Traps 158
a) Mechanical traps 158
b) Cooling (freeze-out) traps 163
10. Vacuum power units 177
11. New kinds of vacuum pumps 182

Ch. VI. Instruments for Measuring Vacuums and for Leak Detection in Vacuum Systems 187
1. Instruments for measuring vacuums 187
2. Methods of leak detection in vacuum systems 210

Ch. VII. Design and Manufacture of Vacuum Systems 223
1. General principles of vacuum system design 223
2. Characteristic features of some vacuum systems 231

a) Vacuum systems of electronic microscopes 231
b) Vacuum systems of high-temperature ovens 244
c) Vacuum systems of mass-spectrometric systems and special pumping stations 248
d) Vacuum systems of detachable electronic lamps 249

Appendixes
1. Capacity (l/sec) of a circular pipe one meter long for a viscous regime depending on pressure P and pipe radius R 252
2. Table of the vacuum-sealing weldability of metals and alloys (according to A.V. Balitskiy) (insert)
3. Flanged sealing with rubber packing for steel and stainless steel seamless pipes (insert)
4. Vacuum entrance for rotating shafts 254
5. Technical parameters and characteristics of rotating oil pumps 258
6. Technical parameters and characteristics of rotating multivane pumps 259
7. Technical parameters and characteristics of mercury vapor pumps 259

8. Technical parameters and characteristics of high-vacuum oil-vapor pumps 261
9. Technical parameters and characteristics of high-vacuum oil-vapor single-serial pumps 262
10. Technical parameters and characteristics of auxiliary (booster) pumps 264
11. Technical parameters and characteristics of nitrogen traps, applied in vacuum power units 265
12. Technical parameters and characteristics of vacuum power units 266

Bibliography 268

AVAILABLE: Library of Congress

Card 6/6

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12-21-59

MIKHNEVICH, V.V.; DANILIN, B.S.; REPNEV, A.I.; SOKOLOV, V.A.

Results of determining atmospheric-structure parameters by means of the third Soviet artificial earth satellite. Isk. sput. zem. no.3:84-97 '59. (MIRA 12:12)
(Artificial satellites) (Atmosphere, Upper--Measurement)

(SOV/25-59-5-14/56

AUTHOR: Danilin, B.S., Candidate of Technical Sciences

TITLE: A Model of the Upper Atmosphere

PERIODICAL: Nauka i zhizn', 1959, No. 5, p 20 (USSR)

ABSTRACT: The author states that only with the help of artificial sputniks have scientists succeeded in determining the density of the atmosphere at upper altitudes. It has been established that the daytime density in summer is 20 times greater than the nighttime density in winter and that the atmospheric density in polar regions is 5 times greater than near the equator. Solar activity and processes are of great importance to the atmosphere of the earth. For instance, solar radiation and solar particles are the cause for polar light, the ionization of the upper strata of the atmosphere and magnetic storms.

Card 1/1

29(0) SOV/29-59-7-23/26

AUTHOR: Danilin, B., Candidate of Technical Sciences

TITLE: Life in the Cosmos (Zhizn' v kosmose)

PERIODICAL: Tekhnika molodezhi, 1959, Nr 7, pp 34-36 (USSR)

ABSTRACT: In this article the author tells of the difficulties and dangers to be faced by man flying through space. Tests carried out with dogs have shown that a highly developed being is well able to stand a flight through cosmos. When ascending into cosmic space, man must, first of all, be able to stand the enormous stress caused by the rapid increase of velocity after the start of the rocket without pain. For this purpose, a counter-pressure capsule was constructed in foreign countries, which is intended to protect man against excessive acceleration of the flight by faulty steering or by a breakdown of the apparatus. A variant of such a capsule, designed on the basis of foreign data, is illustrated on the colored insert. Tests carried out with artificial earth satellites have shown that the danger of damage being done to the space ship by larger meteors is relatively small. A special armor would be an adequate protection in this case. Also the by far greater danger of

Card 1/3

Life in the Cosmos

cosmic radiation might be eliminated by means of a suitable protective layer. The times at which explosions take place on the sun would, however, be little suited for a flight into cosmos space in spite of all countermeasures. For a flight round the earth, which would last only a few hours, a counter-pressure capsule could be used. It would have to be provided with a device for regenerating air and would have to be thrown out of the space ship on landing. However, even a flight to the moon would take longer, i.e. several days. For such a flight the cabins of the space ship would have to be equipped in such a manner that they would be able to offer normal conditions of life to the travellers into space. In view of the high velocities of flight and the enormous distances to be covered, steering the space ship is connected with great difficulties. Devices would have to be created which could compensate the deficiencies of the human eye and of the central nervous system. Besides, steering is rendered difficult by the fact that man, after initial overstressing, must overcome a state of weightlessness, which is very difficult for the human organism. For the purpose of facilitating orientation, it would be suitable, to fasten the traveller through cosmos space to his seat at the beginning of the

flight. A further problem is that of supplying the space traveller with the necessary oxygen, water, and food. Finally, the problem of a return to the earth without danger remains to be solved. There are various methods of reducing velocity and regulating the temperature inside the vessel, but as yet, they are not able to warrant 100% safety. There are 5 figures.

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SOV/25-59-10-3/48

AUTHOR: Danilin, B.S., Candidate of Technical Sciences

TITLE: The Beginning of the Space Age

PERIODICAL: Nauka i zhizn', 1959, Nr 10, pp 2-7 (USSR)

ABSTRACT: The article deals with artificial satellites and cosmic rockets launched by the Soviet Union and tells of the results obtained by instrumented space vehicles. On 14 September 59, the second space rocket reached the moon. On 4 October 59, just two years after the world's first artificial satellite had been launched, the first interplanetary station was sent into space. It travelled to within 7,000 km of the Moon, circled the Moon and moved back to orbit the Earth. Being in a command from Earth, the apparatus installed in the automatic interplanetary station transmitted stored scientific information to the Earth on phenomena occurring in space. The author refers to the second artificial satellite, launched on 3 November 1957 with a more complicated apparatus and the dog Layka on board.

Card 1/7

The Beginning of the Space Age

The third artificial satellite sent into space on 15 May 1958 was equipped with a cosmic laboratory containing a complex variety of perfect devices. In January 59, the Soviets launched the world's first space rocket. This success was possible due to the development of intercontinental ballistic rockets with highly-effective engines, using fuel of a highly calorific value, and due to the development of reliable automatic control systems, which guaranteed stabilization of the rocket's position in space and its accurate flight on the given trajectory. The first satellite was a ball, 58 cm in diameter, had a weight of 83.6 kilograms and was equipped with four long antennas. The sputnik's maximum apogee during the launching period was 947 km and the initial period of the cycle - 96.17 minutes. It had a 92-day lifetime and completed more than 1,400 revolutions. The weight of the rocket carriers of all Soviet satellites was more than 4 tons each. The second artificial satellite was the last stage of a ballistic rocket, and was equipped with scientific apparatuses that weighed

508.3 kg. The maximum apogee during the launching period was 1,671 km and the initial period of the cycle was 103.75 minutes. The satellite had a 162-day lifetime and had performed 2,370 revolutions. The third Soviet satellite, which was detached from the last stage of a rocket carrier, had a weight of 1,327 kg. The maximum apogee during the launching period was 1,880 km and the initial period of rotation - 105.95 minutes. The satellite has already lasted for more than 500 days and performed 7,000 revolutions. Due to the large size of the Soviet satellites, it was possible to equip them with many kinds of scientific devices and feeding sources (storage batteries) and to arrange the devices in a suitable position, thus avoiding an undesirable effect of one measuring or transmitting apparatus on the other. The outstanding qualities of the Soviet intercontinental ballistic rockets made it possible to launch Soviet satellites at an angle of 65° to the equator's plane, thus flying above nearly all points of the Earth. Over a long period of time, it can be observed how the properties

The Beginning of the Space Age

of the atmosphere change simultaneously with alterations in the latitudes and longitudes as well as of the altitude of the satellite's flight, but not less than 160 km. In lower altitudes, the satellite will be destroyed by atmospheric friction. Rockets have a lower speed than satellites and with their help, investigations can be carried out at any altitudes, obtaining a short vertical split of the atmospheric tenuity during the launching period. For this reason, the Soviet Union uses geophysical and meteorologic rockets besides artificial satellites. According to the program of the International Geophysical Year, rockets are being launched in different regions of the Soviet Union: in middle latitudes of the European part of the Soviet Union and at the Franz Josef Land, in equatorial latitudes and near the station Mirnyy in the antarctic regions (aboard the diesel motorship "Ob'"). At the first vertical launching of the geophysical rocket in 1949, a 120 kg scientific apparatus was lifted to an altitude of 110 km; in 1958, a 1.5 ton apparatus to an altitude of 473 km, in July

Card 4/7

The Beginning of the Space Age

1959, 2.2 tons into the upper strata of the atmosphere. The readings of the devices will give new information on the space, changes in the atmosphere, the magnetic field of the Earth, the intensity and composition of cosmic radiation. The investigation of interplanetary gas and the study of meteoric particles may help to define the spacial medium between the Earth and the Moon. Such information is needed for planning of flights into the cosmic space in the future. The rockets will unveil intensity of cosmic radiation and permit a proper elaboration of protective measures of the astronauts to come. Satellites and rockets together with ground radiosondes have disclosed the principal properties of the upper atmosphere at an altitude of 800-1000 km. It has been ascertained that the density of the atmosphere at high altitudes is much higher than had been expected, according to data obtained by former rocket explorations. Density and temperatures of the atmosphere change continuously. It has been revealed that there is a direct relationship between the changes of the properties of the upper atmosphere and

Card 5/7

The Beginning of the Space Age

processes occurring in the Sun. The radio frequency mass-spectrometer, installed in the third Soviet satellite, determined the composition of the ions existing in the atmosphere. It has been proven that atomic oxygen ions prevail at an altitude of 230 - 900 km. The ballistic geophysical rocket launched in July 1959 gave information on the composition of neutral particles, including atoms and molecules of light gases. Investigations with the aid of satellites and rockets revealed the presence of a compact layer of ionized gas beginning at an altitude of 60 km. Even at an altitude of 2 - 3,000 km, several hundreds of electrons are contained in one cubic cm. Devices for recording charged particles have unexpectedly shown that an enormous accumulation of charged particles is moving with a tremendous speed at an altitude of 500 - 1000 km. The magnetometer installed in the third satellite has shown that the two geomagnetic fields decrease approximately at the same rate as their distance from the Earth increases. This indicates that the origins of both fields are located inside the Earth at the same

Card 6/7

The Beginning of the Space Age SOV/25-59-10-3/48

depth. All data obtained by exploring space and by animal experiments show that it will be possible to launch space crafts in the near future. There is 1 diagram, 3 graphs, and a scheme on page 1 of centerfold.

Card 7/7

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AUTHOR: Danilin, B., Candidate of Technical Sciences SOV/29-59-11-5/31

TITLE: Man Storms the Skies

PERIODICAL: Tekhnika molodezhi, 1959, Nr 11, pp 7 - 8 (USSR)

ABSTRACT: Ih this paper, the author gives a short survey of the advance of man into the cosmos starting from the launch of Sputnik I on October 4, 1957 until the launch of the 3rd cosmic rocket on October 4, 1959. The data on the Moon obtained by astronomic, thermal and radar methods (Tekhnika molodezhi, 1958, Nr 10) have been completed by new discoveries. Lately, Soviet scientists succeeded in observing volcanic activity on the Moon. This means that it is not yet completely cold. The Moon's surface consists of porous substances of a spongy structure. This suggests that there are water and oxygen in the interior of the Moon. The oxygen develops by chemical reduction of carbon dioxide expelled from volcanoes. Accordingly, it is possible that primitive animal and, perhaps, short-lived vegetable organisms are existing on the Moon. In order to ensure a proper solution of the extremely important and inter-

Card 1/3

esting problem of aborigines, no microorganisms must be imported from the Earth. For this reason, all apparatus and objects arriving at the Moon had to be perfectly sterilized. This was achieved by chemical and physical means available to Soviet scientists. Most scientific apparatus were destined for investigating cosmic rays. The study of radiation zones is intimately connected with the investigation of the magnetic field. The magnetometer fitted to the rocket detected no magnetic field and no radiation zone of charged particles around the Moon. Preliminary estimates show that between Earth and Moon there are regions where the number of particles is below 100 per cm^3. Approaching the Moon at a distance of about 10,000 km, the currents recorded become stronger. This may be due either to the presence of a peculiar ionosphere, or a zone with increased concentration of corpuscles with energies of dozens of volts around the Moon. With the photographs taken from the Far Side of the Moon, it was first possible to find out the real shape of formations existing there. The launching of cosmic rockets up to and around the Moon shall serve the purpose of detecting the secrets of nature and evaluating its

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Man Storms the Skies

SOV/29-59-11-5/31

forces for the benefit of mankind. There are 3 figures

Card 3/3

DANILIN, Boris Stepanovich, kand.tekhn.nauk; ISLANKINA, T.F., red.; ATROSHCHENKO, L.Ye., tekhn.red.

[Vacuum] Vakuum. Moskva, Izd-vo "Znanie," 1960. 36 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.4, Nauka i tekhnika, no.16). (MIRA 13:7)

(Vacuum) (Vacuum apparatus)

PHASE I BOOK EXPLOITATION SOV/3829

Danilin, Boris Stepanovich

Nachalo kosmicheskoy ery (Emergence of the Space Era) Moscow, Izd-vo "Znaniye," 1960. 41 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IX, 1960, no. 5) 26,000 copies printed.

Ed.: I.B. Faynboym; Tech. Ed.: Ye.V. Savchenko.

PURPOSE: This pamphlet is intended for the general reader

COVERAGE: The pamphlet is a popular propaganda-type presentation of recent achievements in the conquest of cosmic space, with particular emphasis on Soviet contributions. No personalities are mentioned. There are 16 references, all Soviet.

TABLE OF CONTENTS:

First Explorers of the Cosmos [Space] 3

Card 1/3

Emergence of the Space Era SOV/3829

First Sun Satellite 14

First Cosmic Voyage 16

First Automated Interplanetary Station 19

Rockets and Satellites of the USA 22

On the Frontier of the "Air Ocean" [Atmosphere] 28

Radiation Belt Around the Earth and the Enigma of Magnetic Fields 35

Daring Knows no Limits 39

Advice on Methodology to Lecturers [Instructors] 43

Emergence of the Space Era SOV/3829

Bibliography 44

An Address to Readers of the "Znaniye" Pamphlets 45

AVAILABLE: Library of Congress

Card 3/3

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PHASE I BOOK EXPLOITATION SOV/4946

Mikhaylov, A. A., ed.

Stantsii v kosmose; sbornik statey (Space Stations; Collection of Articles) Moscow, Izd-vo AN SSSR, 1960. 444 p. 25,000 copies printed. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya Seriya)

Resp. Ed.: A. A. Mikhaylov; Compiler: V. V. Fedorov; Ed. of Publishing House: Ye. M. Klyaus; Tech. Ed.: I. D. Novichkova.

PURPOSE: This book is intended both for the space specialist and the average reader interested in space problems.

COVERAGE: The book contains 73 short articles by various Soviet authors on problems connected with space travel and the launching of artificial earth satellites and space rockets. The possibilities of future developments are also discussed. The articles were published in the period of 1957-1960. No personalities are mentioned. There are no references.

IV. UNPRECEDENTED FEAT OF SOVIET SCIENCE

Mikhaylov, A. A., Corresponding Member of the Academy of Sciences USSR. Soviet Space Rocket Approaches the Perihelion [October 18, 1959] 340

Shishakov, V., Candidate of Pedagogic Sciences. The Far Side of the Moon [October 8, 1959] 344

Siforov, V. I., Corresponding Member of the Academy of Sciences USSR. Outer Space Photography [October 28, 1959] 348

Dobronravov, V. V., Doctor of Physical and Mathematical Sciences. Automatic Scout of Outer Space [October 28, 1959] 351

Barabashov, N. P., Active Member of the Academy of Sciences UkrSSR. Our Laboratory Is Outer Space [November 3, 1959] 355

Danilin, B. S., Candidate of Technical Sciences. Investigations Broadening Our Knowledge of the Universe [December 1959] 358

Ten Thousand Revolutions Around the Globe [Izvestiya, April 3, 1960] 369

The Third Sputnik Has Ceased to Exist [Izvestiya, April 9, 1960] 375

Danilin, B. S., Candidate of Technical Sciences. Lifeless Cosmonaut [April 14, 1960] 376

V. SPACE SHIPS

TASS Information [May 16, 1960] 381

Motion of a Space Ship [Pravda, May 16, 1960] 383

Stepanov, B., Candidate of Technical Sciences. On the Road to the Stars [May 17, 1960] 384

Fedotov, Yu., Candidate of Medical Sciences. Before the Jump Into Space [May 18, 1960] 389

Kulebakin, V. S., Academician. Automaton in Outer Space [May 20, 1960] 394

TASS Information on the Motion of the Space-Ship Satellite [May 21, 1960] 397

TASS Information 399

Second Soviet Space Ship [Pravda, September 4-6, 1960] 400

Greetings From the Central Committee of the CPSU and the Council of Ministers of the USSR [Pravda, August 23, 1960] 441

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AUTHOR: Danilin, B.S., Candidate of Technical Sciences

TITLE: Before a Great Journey

PERIODICAL: Nauka i zhizn', 1960, No 7, pp 8 - 10

TEXT: The Soviet space-ship, launched on May 15 1960, was sent into a near-circular orbit with an apogee of 369 km and a perigee of 312 km, with an initial orbital cycle of 91 minutes. The weight, after separation from its carrier rocket, was 4 tons 540 kg. The ship contained a hermetic cabin with a load to simulate the weight of a man, together with all the equipment needed for manned flight: total weight 2 5 tons. In addition the ship contained 1,477 kg of other equipment and power sources. On May 19, 1960 the ship completed its scheduled program of measurements and at 2h 52 min. at a command from earth, set into motion the braking motor stabilized itself and launched the hermetic cabin. A fault in one of the instruments made the braking impulse deviate from its scheduled direction The ship increased speed and went into a more extended elliptical orbit with a perigee of 307 and an apogee of 690 km with an orbital cycle of

Card 1/2

94.25 min. The angle of inclination between the orbit and the equatorial plane remained almost unchanged at 65°. With the exception mentioned, all instruments worked well. Commands were received from the earth and implemented efficiently. The retransmission of radio broadcast from the ship's radio-telephone to the earth was accompanied by considerable atmospherics and distortion. Temperature-control and air-conditioning apparatus in the hermetic cabin functioned efficiently and the self-orientating solar batteries were also effective.

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AUTHOR: Danilin, B S Candidate of Technical Sciences

TITLE: Earth - Space - Earth. A Space Ship Has Returned to Earth

PERIODICAL: Nauka i zhizn', 1960, No. 9, pp 2 - 4

TEXT: The heat generated by the re-entry of a satellite or space ship into the earth's atmosphere can be dissipated or partially prevented by: a) the use of refractory materials, b) the injection of a coolant (hydrogen, helium, air, water) onto the surface skin, or b) designing the vessel with a blunt leading portion which, at supersonic speeds, causes the shock wave to rebound carrying with it much of the generated heat. At an orbit of 320 km a vessel would have a speed of about 7.75 km/sec, i e., approximately 28,000km/hr. The force required to place 1 kg into such an orbit would be about 3,500,000 meter-kilograms To avoid the vast amount of fuel which would be required for a motor to brake from this speed for re-entry, the best effect is achieved by repeated shallow plungs into the atmosphere and re-exits, assisted by short bursts from the braking motor.

Card 1/2

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A/166/A029

Earth - Space - Earth. A Space Ship Has Returned to Earth

The second Soviet space ship, with living organisms on bord, returned to earth on August 20, 1960. This ship (4,600kg) showed a difference of only 33 km between its perigee and apogee at an orbital radius of 6,700km During its 18th orbit (after covering more than 700,000km) the command for reentry was given. The vessel's heat protection system maintained normal conditions for all the living organisms in the hermetic cabin At a relatively short distance from the earth the animal container was catapulted free and came safely to earth where it was recovered. The space ship also landed and only 10 km from its scheduled landing point The author goes on to contrast American experiments with space satellites and capsule recovery with Soviet achievements.

Card 2/2

Name : DANILIN, B. S.

Title : Candidate of Technical Sciences.

Remarks : B. S. DANILIN is the author of an article entitled "Explorations Expanding the Knowledge on the Universe" dealing with data related to the third Soviet interplanetary rocket.

Source : M: Stantsii v Kosmose (Stations in Outer Space), a collection of articles, published by the USSR Academy of Sciences, Moskva, 1960, with foreword by Academicians A. N. Nesmeyanov and A. V. Topchiyev, p. 358.

43 10

ACCESSION NR: AP3001199 S/0008/63/000/141/0002/0002

AUTHOR: Danilin, B. (Candidate of Technical Sciences)

TITLE: Atomic -- interplanetary routes

SOURCE: Krasnaya zvezda, 16 Jun 63, p. 2, col. 7

TOPIC TAGS: Geophysical sounding rockets; dogs as experimental passengers

TEXT: In discussing investigations in the field of space biology by means of vertical launchings of geophysical sounding rockets to altitudes of 100 to 400 km, the author states that 32 dogs were sent up in such rockets, undergoing zero-gravity conditions for up to 6 min.
SPAO - Item no. 10

DATE ACQ: 18Jun63

Card 1/1

MASLOV, D.G.; DANILIN, D.A.

Using a sandblast apparatus to drill holes in granite. Rats. i izobr. predl. v stroi. no.105:17-18 '54. (MLRA 8:10)
(Drilling and boring)

[illegible]ALIN, G[illegible]

[illegible]th conference of the international [illegible] [illegible]rganization. [illegible] prof. [illegible]vizh. no.[illegible] [illegible] (MLRA 10:8)

(International Labor Organization)

DANILIN, I.I., starshiy nauchnyy sotrudnik; TUGOLUKOV, V.N., kand.med.nauk

Effect of ionized air on blood coagulation and erythrocyte sedimentation reaction in donors. Akt.vop.perel.krovi no.4:41-43 '55. (MIRA 13:1)

(AIR, IONIZED--PHYSIOLOGICAL EFFECT)
(BLOOD--COAGULATION) (BLOOD--SEDIMENTATION)

DANILIN, I.I., starshiy nauchnyy sotrudnik

Method for calculating stained thrombocytes in a chamber. Akt.vop. perel.krovi no.4:223-224 '55. (MIRA 13:1)

1. Zav. otdelom - prof. Sherman.
(BLOOD PLATELETS) (STAINS AND STAINING (MICROSCOPY))

ROZHDESTVENSKAYA, M.A., starshiy nauchnyy sotrudnik; DANILIN, I.I., starshiy nauchnyy sotrudnik; MIKHNOVICH, Ye.P., nauchnyy sotrudnik

Preservative solutions with mono- and disaccharides. Akt.vop.perel. krovi no.7:84-87 '59. (MIRA 13:1)

1. Laboratoriya konservirovaniya krovi Leningradskogo instituta pereli-vaniya krovi (zav. laboratoriyey - starshiy nauchnyy sotrudnik M.A. Rozhdestvenskaya).
(BLOOD--COLLECTION AND PRESERVATION)

20396

S/182/61/000/008/006/006
D038/D112

1.1110 2908

AUTHORS: Chernyy, G.S., Danilin, I.N.

TITLE: Machining large parts of hydraulic presses

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 8, 1961, 42-45

TEXT: The article deals with special equipment and methods used at the NKMZ Plant. They are the result of years of systematic development. Round milling was chosen on account of its high cutting rate. Large 350-700 mm diameter milling heads with 40 x 40 mm carbide-tipped cutting inserts were used. The heads are set directly on the spindle of machine tools (boring or milling). The same heads with a spindle cutter are used in finish milling. Special highly productive heads (Fig. 1) can work 2000 mm wide surfaces. This head serves, at the same time as the machine face plate. Its diameter is 2250 mm; forty-eight 40 x 40 mm cutters are tipped with T 5K10 (T5K10) alloy. These heads remove up to 20 mm allowance in a single pass. The new method is from 5 to 7 times faster than usual milling. Single-tooth finishing milling heads (Fig. 2) have one wide cutter and operate with low cutting depth (0.05-0.2 mm) and high feeds (2-3 mm rev) at 200-350 m/min speed. The cutter setting is simple, cutting needs no high effort, and

Card 1/8

20396

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Machining large parts of hydraulic presses D038, D112

causes no considerable increase in temperature; the surface finish is up to class 7 (▽7), and machining of unique parts is possible on vertical boring machines, which is very important in view of the small size of today's milling and shaping machines. Boring machines are used for semi-finish and finish machining of planes up to 1100 mm in width and 7250 mm in length in a single pass. The wide cutter is fixed in a special holder placed on the planetary rest of the machine. These planes are milled with 0.15-0.2 mm cutting depth; 2-2.5 mm/ rev feed at 40-45 rpm. Multicutter heads are advantageous in rough cutting only (since the accuracy is determined by only one protruding cutter). Spherical surfaces of heavy parts are machined with single-cutter mills, with rotation of the machine table and milling head. The rotation axes of the blank and the milling head cross each other to produce a spherical surface. Semi-finish cutting is done by two cutters (four for 400 mm diameter spheres), and finish cutting by one only. The finish cutter is ground with a 3 mm radius at the tip and is carefully lapped on the front and rear face. This method is from 3.5 to 4 times more productive than usual methods, as it does away with fitting in assembly. Spheres of 3200 diam. were machined. Large bores up to [illegible]0 mm diam., and up to 3000 mm in length in solid metal are produced by annular drilling on horizontal boring machines. A comparatively simple and handy drilling head

Card 2/8

was made from a thick wall pipe (Fig. 3). To fix the head in the spindle, a shank (4) is screwed on it. A rotary receiver (5) is provided for liquid coolant. Cutters (1) are inserted into the body on cast iron guide blocks (2). Bores 3000 mm in length are worked from both sides. Spin forging is used extensively. Bore surfaces are oiled and rolled over with rollers which are held in special holders on the machine tool post. A special stand (Fig. 4) is used for machining the outline of large flat parts; 3800 wide and 16500 mm long parts were machined on it. An obsolete lor[illegible] boring machine with 50 m long guides was used for a stand. Two boring heads with a 175 mm spindle diameter, from the Leningradskiy zavod im. Sverdlova (Leningrad Plant im. Sverdlov) are used on the stand. Vertical plates are machined on two stands (Fig. 5) with a 3400 x 40,000 mm floor made up of bolted and concreted 2100 x 5000 mm cast iron plates. Two boring machines move along 45 m long guide ways from each side of the stand. Each machine can travel a distance of 35 m. Two parts can be installed and fastened on devices assembled on the plate floor. There is a stand (Fig. 7) for vertical boring in the assembled press frames. A vertical boring head for this operation is shown separately (Fig. 6). There are 7 figures.

Card 3/8

20396

S/182/61/000/005/006/006
D058/D112

Machining large parts of hydraulic presses

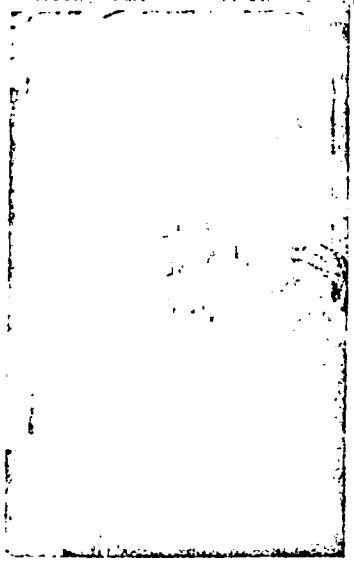

Fig. 1. 2250 mm diam. milling head

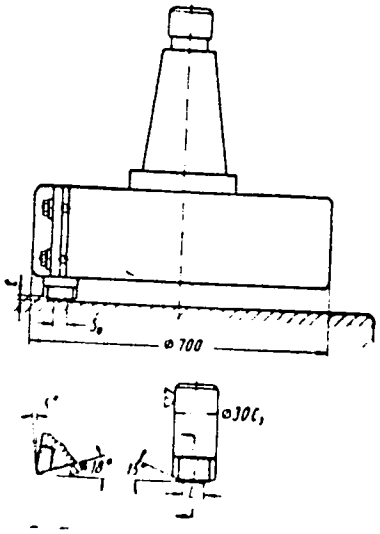

Fig. 2. Single-tooth finishing milling head

Card 4/8

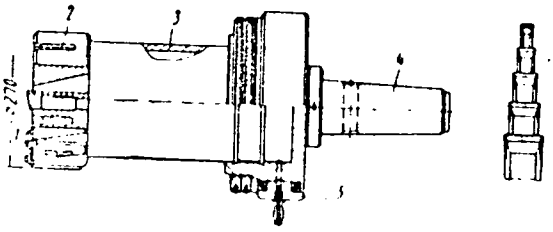

Fig. 3. Annular boring head

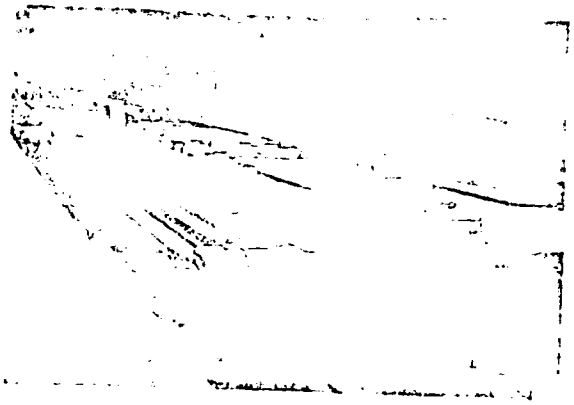

Fig. 4. General view of the sie-

20396

Machining large parts of hydraulic presses S/182/61/000/00 /006/006
D038/D112

Fig. 5. Stand for machining vertical plates

Card 6/8

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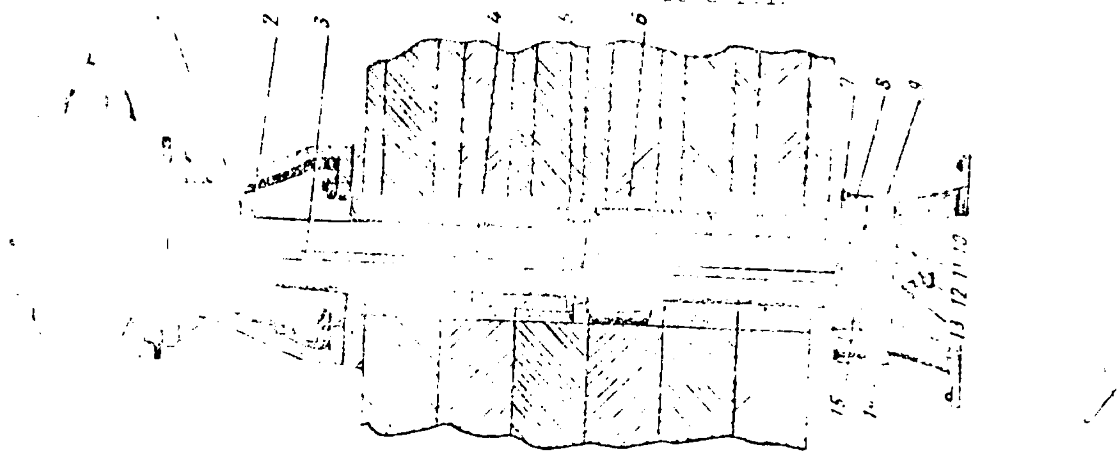

Fig. 6. Vertical boring head with boring bar: 1 - control wheel; 2 - micrometer; 3 - radial feed shaft; 4 - tension strip; 5 - measuring ring; 6 - coupling; 7 and 8 - covers; 9 - spherical bush; 10 - differential nut; 11 - spline; 12 - governing screw; 13 - block; 14 - bearing; 15 - bushing.

Card 7/8

Machining large parts of hydraulic presses S/182/61/000/005/006/006
D038/D112

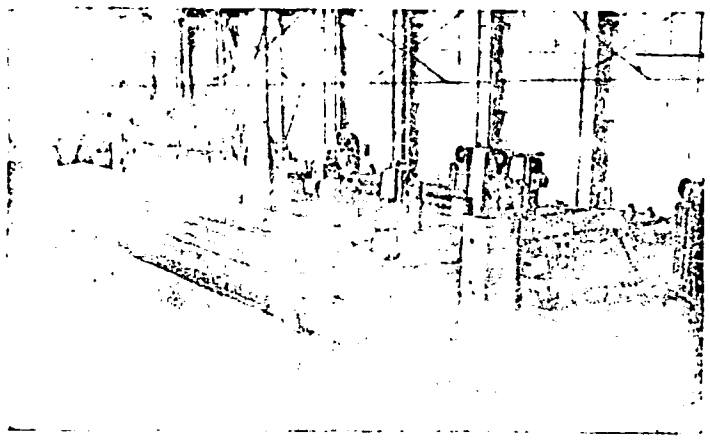

Fig. 7. Stand for boring assembled press frame

Card 8/8

AUTHOR: Danilin, I.T.

TITLE: Operating Experience with Expansion Switches on Electric Furnaces (Opyt ekspluatatsii ekspansionnyah vyklyuchateley na elektropechakh)

PERIODICAL: Metallurg, 1958, Nr 9, pp 17 - 18 (USSR)

ABSTRACT: Type VMB-10 oil-immersed switches rated at 600 A installed on the 10-ton furnaces with 5 000 KvA, 6 kV transformers at the Krasnyy Oktyabr' Works failed to work satisfactorily or safely, even when maintained every 5 days. The author complains that the Soviet electrical industry has still not improved on these switches. He mentions that Siemens-Shukker expansion switches (20 kV, 600 A) proved satisfactory after the modification of their contacts to the form used in type VMG-133 switches (figure). They have worked satisfactorily for 6 months and the author suggests that the Soviet switch-makers should produce switches based on the experience of Soviet works.
There is 1 figure.

Card 1/2